

IN THE CLAIMS

1. (Currently Amended) A method of providing TV signals to multiple subscribers and bidirectional telephonic communications to a multiplicity of subscribers through a single optical fiber comprising the steps of:

transmitting light at a first wavelength carrying plain old telephone service telephonic signals from a first plurality of telephone related devices and at a second wavelength carrying TV signals from a TV signal source through an optical fiber from a first end to a second end;

receiving said first wavelength of light and generating first electrical signals within a first frequency band and representative of said plurality of plain old telephone service telephonic signals;

receiving said second wavelength of light and generating second electrical signals within a second frequency band and representative of said TV signals;

transmitting said plain old telephone service telephonic electrical signals to a plurality of telephone related devices and said second electrical signals to a plurality of TV signal receiving devices;

generating a plurality of return electrical plain old telephone service telephonic signals at said first frequency band representative of return telephonic information and a plurality of TV related electrical signals at a third frequency band representative of TV related information from said plurality of subscribers;

multiplexing said electrical signals carrying said return plain old telephone service telephonic signals at said first frequency band and said TV related electrical signals carrying said TV related information at said third frequency band;

receiving said multiplexed electrical signals and generating light at said first wavelength representative of said return plain old telephone service telephonic signals and said TV related information;

transmitting light at said first wavelength and carrying said return plain old telephone service telephonic signals and said TV related information through said optical fiber from said second end to said first end;

receiving said light carrying said return plain old telephone service telephonic signals and said TV related information and generating a plurality of third electrical signals representative of said return plain old telephone service telephonic signals and a plurality of fourth electrical signals representative of said TV related information;

and transmitting said third electrical signals to said first plurality of telephone related devices and said fourth electrical signals to said TV signal source.

2. (Original) The method of claim 1 wherein said first wavelength of light is 1310 nanometers and said second wavelength of light is 1550 nanometers.

3. (Original) The method of claim 1 wherein said highest frequency of said first frequency band is less than about 60 KHz.

4. (Original) The method of claim 3 wherein said third frequency band is between about 5 and about 50 MHZ.

5. (Original) The method of claim 4 wherein said second frequency band is between about 50 MHZ and about 800 MHZ.

6. (Canceled).

7. (Currently Amended) Communication signal transmission apparatus for carrying unidirectional TV signals downstream from a source to a first user and for carrying TCM (time compression modulation) bidirectional plain old telephone service telephonic signals between said first user and a second user comprising:

an optical fiber suitable for simultaneously carrying two distinct wavelengths of light of a first wavelength and a second wavelength by WDM (wave division multiplexing) between a first location and a second location;

conversion apparatus located at said second location and connected to said optical fiber, said conversion apparatus converting optical signals at said first wavelength of light and carrying said unidirectional TV signals to electrical TV signals at a first frequency, converting optical signals at said second wavelength of light and carrying said TCM bidirectional plain old telephone service telephonic signals to electrical telephonic signals, and converting electrical telephonic signals to TCM bidirectional telephonic optical signals at said second wavelength of light;

a first electrical conductor for receiving and carrying TV signals at said first frequency from said second location to a TV signal user device;

TV related signals at a second frequency generated by said TV signal user device connected to said first electrical conductor and transmitted from said TV signal user device at said second location;

a pair of electrical conductors for receiving and carrying said bidirectional plain old telephone service telephonic signals between said second location and a user device;

a multiplexer for combining said TV related signals and said bidirectional plain old telephone service telephonic signals to produce said electrical telephonic signals converted to optical signals at said second wavelength of light by said conversion apparatus;

a TV signal source connected to said optical fiber at said first location to modulate said first wavelength of light;

a second converting device for converting electrical signal to optical signals at said first wavelength of light and optical signal at said second wavelength of light to electrical signals; and

a telephonic signal user device for sending and receiving said bidirectional plain old telephone service telephonic signals.